In 1988, the best-selling products were My Talk, ACCESSNATEFILE and CCT-98II.

Integrated Systems

Most integrated software programs are supplied by hardware manufacturers who do not report their sales.

Graph Chart Software

In 1988, the graph chart software market enjoyed an annual 132 per cent increase. Sales of graph chart software have slowly shifted away from hardware manufacturers. Independent software developers account for the majority of this market. As a result, distributors have assumed greater importance.

In 1988, the best-selling products were Microsoft Chart and CHARTUP.

Graphics Software

Until 1987, average sales of graphics software were ¥20 million per company. Graphics software is growing in popularity.

In 1988, the best-selling products were Z's STAGG Kid 98, Hanako and CANDY 3.

CAD Software

In 1988, sales of CAD software experienced an annual increase of 58 per cent. Software developers enjoyed a 220 per cent increase in sales of CAD software whose most important user is the construction industry. Significant future growth is expected in this market.

9 Key Associations in the Information Industry

Information-Technology Promotion Agency, Japan (IPA)

The IPA was established by the Machinery and Information Industries Bureau's Data Processing Section of MITI. Private companies are allowed to participate and invest in IPA, which is the only national body that promotes the information processing industry. In 1985, IPA undertook the five-year Sigma Project, with a ¥25 000 million .budget, to create a sophisticated and integrated software development support system.

Publications: *Joho Shori Sangyo Keiei Jittai Hokokusho (Information Processing Industry Business Situation Report)* (annually/J); *Sigma News* (Non-periodical/J).

Interoperability-Technology Association for Information Processing (INTAP)

INTAP was established under the authority of MITI as a non-profit R&D organization in the field of interoperability for information processing. INTAP is developing a database system capable of accessing multi-media information sources in networks with information-related devices and systems, in conformity with standards of Open Systems Interconnection and the International Organization for Standardization. It develops functional standards of OSI as a part of MITI's Interoperable Database Systems project, which is scheduled to be completed by 1991 at a cost of ¥15 billion.

Publications: *INTAP Journal* (quarterly/J).

Japan Data Communications Association (JDCA)

JDCA was established, with the support of NTT and KDD, to promote the development and diffusion of data communications. Member firms include NEC, Fujitsu, Toshiba and Hitachi. JDCA has become very active since Japanese telecommunications have been deregulated. JDCA conducts independent research on communication science, office information systems and artificial intelligence (AI) technology. Research has been contracted out to overseas organizations in the areas of satellite communications and utilization condition of IC cards.

Publications: *Nippon Data Tsushih* (quarterly/J).

Japan Information Processing Development Center (JIPDEC)

JIPDEC, established under the authority of MITI, the Ministry of Posts and Telecommunications and computer firms, plays an important role in the information processing field. It provides training in information processing technologies through its affiliated organizations.

Publications: *Johoka Hakusho* (annual/J); *Information White Paper* (annual/E); *JIPDEC Journal* (quarterly/J); *Japan Computer Quarterly* (quarterly/E).